

Claims

1. The use of melagatran, or a pharmaceutically-acceptable derivative thereof, for the manufacture of a medicament for the treatment of Type I
5 diabetes mellitus.
2. The use of melagatran, or a pharmaceutically-acceptable derivative thereof, for the manufacture of a medicament for use in a method of transplantation of cells.
10
3. The use as claimed in Claim 2, wherein the cells are insulin-producing cells or precursors thereof.
4. The use as claimed in Claim 2 or Claim 3, wherein the cells are islets
15 of Langerhans.
5. The use as claimed in Claim 3, wherein the precursors of insulin-producing cells are stem cells.
- 20 6. The use of melagatran, or a pharmaceutically-acceptable derivative thereof, for the manufacture of a medicament for use in a method of engrafting islets of Langerhans.
7. The use as claimed in Claim 6, wherein the islets engraft in the liver.
25
8. The use of melagatran, or a pharmaceutically-acceptable derivative thereof, for the manufacture of a medicament for use in a method of improving insulin-independency in patients having Type I diabetes mellitus.

9. The use of melagatran, or a pharmaceutically-acceptable derivative thereof, for the manufacture of a medicament for the treatment of instant blood-mediated inflammatory reaction.
- 5 10. The use as claimed in any one of Claims 1 to 9, wherein the derivative of melagatran is a prodrug of melagatran.
11. The use as claimed in Claim 10, wherein the prodrug is of the formula
- 10
$$R^1O_2C-CH_2-(R)Cgl-Aze-Pab-OH,$$
 wherein R^1 represents linear or branched C_{1-6} alkyl and the OH group replaces one of the amidino hydrogens in Pab.
12. The use as claimed in Claim 11, wherein R^1 represents methyl, ethyl, 15 n-propyl, i-propyl or t-butyl.
13. The use as claimed in Claim 12, wherein R^1 represents ethyl.
14. A method of treating Type I diabetes mellitus, which comprises 20 administering a therapeutically-effective amount of melagatran, or a pharmaceutically-acceptable derivative thereof, to a patient in need of such treatment.
15. A method of transplantation of cells, which method comprises the 25 administration of a therapeutically-effective amount of melagatran, or a pharmaceutically-acceptable derivative thereof, to a patient about to be, being, or having been, subjected to such transplantation.

16. A method as claimed in Claim 15, wherein the cells are insulin-producing cells or precursors thereof.
17. A method as claimed in Claim 15 or Claim 16, wherein the cells are
5 islets of Langerhans.
18. A method as claimed in Claim 16, wherein the precursors of insulin-producing cells are stem cells.
- 10 19. A method of engrafting islets of Langerhans, which method comprises administering a therapeutically-effective amount of melagatran, or a pharmaceutically-acceptable derivative thereof, to a patient about to be, being, or having been, subjected to transplantation of such islets.
- 15 20. A method as claimed in Claim 19, wherein the islets engraft in the liver.
21. A method of improving insulin-independency in patients having Type I diabetes mellitus, which method comprises administering a
20 therapeutically-effective amount of melagatran, or a pharmaceutically-acceptable derivative thereof, to a patient in need of such improvement.
22. A method of treatment of instant blood-mediated inflammatory reaction, which method comprises administering a therapeutically-effective
25 amount of melagatran, or a pharmaceutically-acceptable derivative thereof, to a patient in need of such treatment.
23. A method as claimed in any one of Claims 14 to 22, wherein the derivative of melagatran is a prodrug of melagatran.

24. A method as claimed in Claim 23, wherein the prodrug is of the formula



5 wherein R^1 represents linear or branched C_{1-6} alkyl and the OH group replaces one of the amidino hydrogens in Pab.

25. A method as claimed in Claim 24, wherein R^1 represents methyl, ethyl, n-propyl, i-propyl or t-butyl.

10

26. A method as claimed in Claim 25, wherein R^1 represents ethyl.

27. A pharmaceutical formulation for use in the treatment of Type I diabetes mellitus, which formulation comprises an effective amount of
15 melagatran, or a pharmaceutically-acceptable derivative thereof.

20

28. Use of melagatran, or a pharmaceutically-acceptable derivative thereof, for the treatment of Type I diabetes mellitus, by administering melagatran, or a pharmaceutically-acceptable derivative thereof, to a patient.

29. A kit of parts comprising components:
(a) a first component comprising melagatran or a pharmaceutically-acceptable derivative thereof; and
(b) a second component comprising cells,
25 which components (a) and (b) are each provided in a form that is suitable for administration in conjunction with the other.

30. A kit as claimed in Claim 29, wherein the cells are insulin-producing cells or precursors thereof.

31. A kit as claimed in Claim 29 or Claim 30, wherein the cells are islets of Langerhans.
- 5 32. A kit as claimed in Claim 30, wherein the precursors of insulin-producing cells are stem cells.
33. A kit of parts comprising:
(I) one of components (a) and (b) as defined in any one of Claims 29 to 32;
10 together with
(II) instructions to use that component in conjunction with the other of the two components.
34. A formulation, use or kit as claimed in any one of Claims 27 to 33
15 (as appropriate), wherein the derivative of melagatran is a prodrug of melagatran.
35. A formulation, use or kit as claimed in Claim 34, wherein the prodrug is of the formula
20
$$R^1O_2C-CH_2-(R)Cgl-Aze-Pab-OH,$$

wherein R^1 represents linear or branched C_{1-6} alkyl and the OH group replaces one of the amidino hydrogens in Pab.
36. A formulation, use or kit as claimed in Claim 35, wherein R^1
25 represents methyl, ethyl, n-propyl, i-propyl or t-butyl.
37. A formulation, use or kit as claimed in Claim 36, wherein R^1 represents ethyl.

38. A method of making a kit of parts as defined in any one of Claims 29 to 32 or 34 to 37; which method comprises bringing a component (a), as defined in any one of Claims 29 to 32 or 34 to 37, into association with a component (b), as defined in any one of Claims 29 to 32 or 34 to 37, thus rendering the two components suitable for administration in conjunction with each other.